Shorter Contributions

Banisteria, Number 36, pages 39-40

LATE GROUND NESTING OF MOURNING DOVE (*ZENAIDA MACROURA*) ON ASSATEAGUE ISLAND, VIRGINIA. — On 17 September 2009, I observed a pair of nestling Mourning Doves (*Zenaida macroura*) in a ground nest on Assateague Island, Chincoteague National Wildlife Refuge, Accomack County, Virginia. The nestlings, which appeared to be about 10 days old based on the extent of feather sheathing on the head and neck (Hanson & Kossack, 1957), were huddled in a shallow depression in pine needle litter (Fig. 1). The nest site was screened by a thicket of greenbriar (*Smilax* sp.) and shaded by tall loblolly pines (*Pinus taeda*). An irregular ring (ca. 30-35 cm in diameter) of feces around the nestlings indicated that the doves had been present at the site for several days, signifying a ground nest rather than a post-fledging "reference area" (Grand & Mirarchi, 1988). Ground nesting occurs frequently in open habitats west of the Mississippi River (Cowan, 1952; Howe & Flake, 1989), but it is relatively uncommon in forested regions of eastern North America (Drobney et al., 1998). However, Hon (1956) found a substantial number of ground nests on small islands supporting few trees or mammalian predators off the coast of North Carolina. Ground nesting has been poorly documented in Virginia (Lewis, 1936). Given an incubation period of about 14 days (Hanson & Kossack, 1957), a laying date of 23 August can be inferred for the first egg of the customary two-egg clutch. This constitutes a moderately late date for Virginia and the Delmarva Peninsula (Clapp, 1997; Robbins & Blom, 1997).

One additional point deserves comment. I was struck by the resemblance of the compact nestlings to pine cones that littered the ground. Grayish plumage color and contrasting feather tips effectively mimic

Fig. 1. Nestling Mourning Dove (*Zenaida macroura*) in a ground nest on Assateague Island, Virginia, on 17 September 2009.

the imbricated scales of weathered, unopened cones. Although this highly adaptable species nests in a wide range of habitats in North America that lack pines, this incident suggests that the juvenal plumage may afford good camouflage in pine-dominated habitats.

I thank Roger Clapp for sharing his knowledge of the literature.

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Banisteria, Number 36, pages 40-43

GEOCORIS ULIGINOSUS, A BIGEYED BUG (HEMIPTERA: LYGAEOIDEA: GEOCORIDAE) ASSOCIATED WITH *PHLOX SUBULATA* IN MID-APPALACHIAN SHALE BARRENS. — Bigeyed bugs, so-called because of their prominent eyes (stylate or nearly so), were long placed as a subfamily (Geocorinae) of the family Lygaeidae. Geocorines now belong to a separate lygaeoid family, the Geocoridae, following division of a paraphyletic Lygaeidae into smaller, monophyletic families (Henry, 1997). *Geocoris uliginosus* (Say) is a common eastern North American species (Sweet, 2000) found statewide in Virginia from sea level to about 5,000 ft (1,525 m) on Mount Rogers (Hoffman, 1996). Species of *Geocoris* can be difficult to identify (Hoffman, 1996; Sweet, 2000), but *G. uliginosus* can be recognized east of the Mississippi (its range extends west to New Mexico and Texas; Ashlock & Slater, 1988) by its almost uniformly black coloration. Adults are oval with males about 3.3 mm and females about 3.5 mm long. This geocorid is found mainly around houses, along roadways, and in agroecosystems and other disturbed habitats (Readio & Sweet, 1982). Adults are fully winged (macropterous), which is typical of most species of *Geocoris* that occupy temporary habitats (Readio & Sweet, 1982; Sweet, 2000).

Geocoris uliginosus has been studied mainly in managed systems such as field crops (Whitcomb & Bell, 1964; Roach, 1980) and turfgrasses, where the principal prey of this generalist predator are chinch bugs, *Blissus* species (Lygaeoidea: Blissidae) (Dunbar, 1971; Reinert, 1978; Carstens et al., 2008). Numerous other small arthropods serve as prey (Crocker & Whitcomb, 1980), including eggs and neonate larvae of the fall armyworm, *Spodoptera frugiperda* (J. E. Smith) (Braman et al., 2003). As in many other species of *Geocoris*, cannibalism is common under laboratory conditions (Readio & Sweet, 1982; Sweet, 2000). During times of low prey densities, the omnivorous *G. uliginosus* can switch to scavenging and phytophagy (Sweet, 1960; Crocker & Whitcomb, 1980; Readio & Sweet, 1982; Carstens et al., 2008). Some plant feeding, which does not damage plants (Crocker & Whitcomb, 1980), might be needed for optimal performance (Sweet, 2000). *Geocoris uliginosus* can live as long as four months on a diet of sunflower seeds and water (Sweet, 1960). This mainly geophilous bug is found less often on plants than are syntopic congeners such as *G. punctipes* (Say) (Crocker & Whitcomb, 1980; Readio & Sweet, 1982; Sweet, 2000).